

### I. AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

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- 1) (currently amended) A feed arrangement for a telephone subscriber loop having a plurality of conductors, comprising:
    - a) an output for connection to the conductors of the loop to impress across the conductors of the loop a voltage differential; and
    - b) a control element operative for:
      - i. deriving a data element indicative of a rate of change of a current in the subscriber loop;
      - ii. processing the data element indicative of a rate of change of a current in the subscriber loop to detect a change in the number of CPEs active in the telephone subscriber loop;
      - iii. in response to a change in the number of CPEs active in the telephone subscriber loop, regulating a magnitude of a current in the subscriber loop to a target value selected in a set of target values in dependence upon a number of CPEs active in the telephone subscriber loop.
  - 2) (original) A feed arrangement as defined in claim 1, wherein said control element is responsive to an actuation of one CPE in the telephone subscriber loop that already contains at least one other active CPE, to effect a change in the target value at which the current in the subscriber loop is regulated.
  - 3) (original) A feed arrangement as defined in claim 2, wherein the target value selected by said control element when A CPEs are active in the telephone subscriber loop is higher than the target value selected by said control element when B CPEs are active in the telephone subscriber loop, where  $A > B$ .

- 4) (original) A feed arrangement as defined in claim 3, where A is at least 1.
- 5) (original) A feed arrangement as defined in claim 3, wherein the telephone subscriber loop includes a tip conductor and a ring conductor, a CPE active in the telephone subscriber loop being connected across the tip conductor and the ring conductor.
- 6) (original) A feed arrangement as defined in claim 5, wherein said control element includes at least one control input for receiving an input control signal indicative of the magnitude of a current in the tip conductor.
- 7) (original) A feed arrangement as defined in claim 6, wherein:
- a) said control input is a first control input;
  - b) said input control signal is a first input control signal; and
  - c) said control element includes a second control input for receiving a second input control signal indicative of a magnitude of a current in the ring conductor.
- 8) (original) A feed arrangement as defined in claim 7, wherein:
- a) said feed arrangement includes an input for connection to a power supply that generates an output voltage applied to the input of said feed arrangement;
  - b) said control element is responsive to the first and second input control signals to generate an output control signal;
  - c) said control element includes an output to release the output control signal; and
  - d) the output control signal being suitable for controlling the output voltage of the power supply such as to bring about in the telephone subscriber loop a current having a magnitude that corresponds generally to a target value selected by said control element in said set of target values.
- 9) (currently amended) In combination:
- a) [[A]] a power supply;

- b) a feed arrangement for a telephone subscriber loop having a plurality of conductors, including:
- i) an input connected to said power supply;
  - ii) an output for connection to the conductors of the subscriber loop to impress across the conductors of the subscriber loop a voltage differential; and
  - iii) a control element operative for:
    - a. deriving a data element indicative of a rate of change of a current in the subscriber loop;
    - b. processing the data element indicative of a rate of change of a current in the subscriber loop to detect a change in the number of CPEs active in the telephone subscriber loop;
    - c. in response to a change in the number of CPEs active in the telephone subscriber loop, regulating a magnitude of a current in the subscriber loop to a target value selected in a set of target values in dependence upon a number of CPEs active in the telephone subscriber loop.

- 10) (original) A combination as defined in claim 9, wherein:
- a) said control element includes an output to release an output control signal;
  - b) said output being in communication with said power supply; and
  - c) said power supply being responsive to the output control signal to impress a voltage differential at said input to bring about in the subscriber loop a current having a magnitude corresponding generally to the target value selected in the set of target values.
- 11) (original) A combination as defined in claim 10, wherein said control element is responsive to an actuation of at least one CPE in the telephone subscriber loop that already contains at least one other active CPE, to effect a change in the target value at which the current in the subscriber loop is regulated.
- 12) (original) A combination as defined in claim 11, wherein the target value selected

by said control element when A CPEs are active in the telephone subscriber loop is higher than the target value selected by said control element when B CPEs are active in the telephone subscriber loop, where  $A > B$ .

- 13) (original) A combination as defined in claim 12, where A is at least 1.
- 14) (original) A combination as defined in claim 13, wherein the telephone subscriber loop includes a tip conductor and a ring conductor, a CPE active in the telephone subscriber loop being connected across the tip conductor and the ring conductor.
- 15) (original) A combination as defined in claim 14, where said control element includes at least one control input for receiving an input control signal indicative of a magnitude of a current in the tip conductor.
- 16) (original) A combination as defined in claim 15, wherein:
- a) said control input is a first control input;
  - b) said input control signal is a first input control signal; and
  - c) said control element includes a second control input for receiving a second input control signal indicative of a magnitude of a current in the ring conductor.
- 17) (original) A combination as defined in claim 16, where said control element is responsive to the first and second input control signals to generate the output control signal.
- 18) (currently amended) A method for regulating the magnitude of current in a subscriber loop, comprising:
- a) regulating the magnitude of the current to a first target value when a first CPE is active in the subscriber loop;
  - b) deriving a data element indicative of a rate of change of a current in the subscriber loop;
  - c) processing the data element indicative of a rate of change of a current in the

subscriber loop to detect an increase in the number of CPEs active in the telephone subscriber loop;

- d) in response to an increase in the number of CPEs active in the telephone subscriber loop, and regulating the magnitude of the current to a second target value, higher than the first target value when at least one additional CPE becomes active in the subscriber loop such that the subscriber loop feeds at least two CPEs simultaneously.

19) (currently amended) A feed arrangement for a telephone subscriber loop having a plurality of conductors, comprising:

- a) output means for connection to the conductors of the loop to impress across the conductors of the loop a voltage differential; and
- b) control means for:
- i. deriving a data element indicative of a rate of change of a current in the subscriber loop;
  - ii. processing the data element indicative of a rate of change of a current in the subscriber loop to detect a change in the number of CPEs active in the telephone subscriber loop;
  - iii. in response to a change in the number of CPEs active in the telephone subscriber loop, regulating a magnitude of a current in the subscriber loop to a target value selected in a set of target values in dependence upon a number of CPEs active in the telephone subscriber loop.